

Do you clean oxygen system components?

Would you like to improve this process in the following areas?

- **Meet environmental compliance regulations.** Reduce air emissions by eliminating the use of ozone depleting substances (ODSs). Media areas include air and hazardous waste programs.
- **Improve workers' safety and health.** Reduce exposure to harmful solvents.
- **Increase productivity.** Reduce labor hours required for oxygen system component cleaning.
- **Save money.** Reduce the cost for management of environmental compliance requirements.



Oxygen Component Ultrasonic Cleaning System

*The Oxygen Component Ultrasonic Cleaning System is a two step, two tank parts washer unit that cleans and rinses navy aircraft support equipment, oxygen components and navy aircraft and aviator's oxygen equipment. These oxygen system components are immersed in a heated solution of Navy Oxygen Cleaner instead of typical ODSs like CFC-113 or Freon. This medium is used to ultrasonically "scrub" the parts clean of all films and contaminants. All cleaned parts are then rinsed in a tank of heated demineralized water. This system is ready for use on ships and at Navy shore installations. It is not designed or intended to remove gross deposits of contaminants, but to remove film and contaminants that may pose a fire or health hazard to oxygen component users. **Ultrasonic Cleaning System equipment is available through the Navy Pollution Prevention Equipment Program.***

How can you achieve these improvements?

Use the Oxygen Component Ultrasonic Cleaning System.

How does this equipment work?

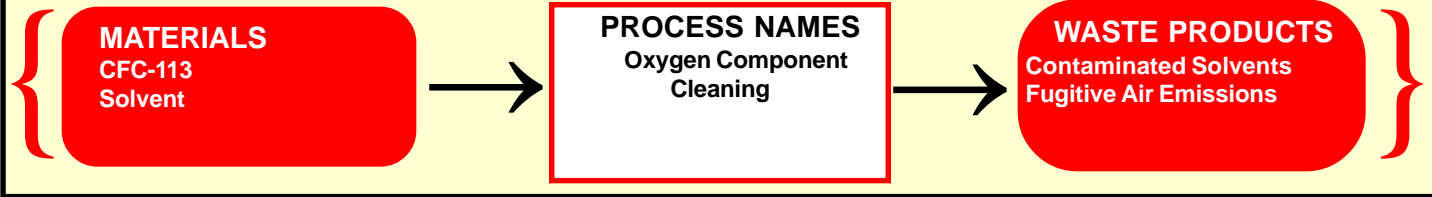
Sound waves, or vibrations, are transmitted through a liquid medium to produce cavitation bubbles that "scrub" oxygen system components free of films and contaminants.

How will this equipment save you money?

By eliminating the use of CFCs and reducing environmental management costs. Typically, this equipment will pay for itself in less than a year. The cost is approximately \$6,600.



Typical Process Flow Diagram



How can this technology eliminate or reduce pollution?

This technology can eliminate the purchase, use and disposal of CFC-113 used to clean oxygen system components. Use will result in the following pollution reductions:

- Reduction in use and disposal of solvents.
- Reduction of air emissions related to solvent use.

Which shops can benefit most from this technology?

This technology can be used in processes that clean oxygen system components. Shops that could benefit include:

- Naval aircraft support equipment shops
- Intermediate maintenance activities

How can this technology reduce regulatory compliance concerns?

This technology eliminates the use of CFC-113 for cleaning oxygen system components, thereby reducing ODS emissions. Use will result in the following regulatory compliance benefits:

- Eliminates the use of substances that are being phased out of production under the Montreal Protocol.
- Helps facilities comply with DoD and Navy policy and goals regarding reduction in ODS usage.

Achieving Environmental Compliance Through Pollution Prevention

Every day the Navy faces the challenge of operating and maintaining the fleet while complying with environmental regulations. This burden can be reduced by using pollution prevention technologies and methods to reduce compliance requirements. This fact sheet is one in a series designed to encourage activities to use pollution prevention technologies and methods. The overall goal of this series is to promote sustained environmental compliance at the lowest life-cycle cost.

For additional information, contact:

Joint Service P2 Opportunity Handbook Data Sheet Number 8-I-10 (<http://enviro.nfesc.navy.mil/p2library>) and the PPEP Equipment Book (<http://www.lakehurst.navy.mil/p2/main.htm>).

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